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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,598	02/12/2004	Myung-ryul Jung	Q77889	3487
23373	7590	09/28/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			MAHONEY, CHRISTOPHER E	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/776,598

Applicant(s)

JUNG, MYUNG-RYUL

Examiner

Christopher E. Mahoney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-8 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1 and 3-8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 18 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: The disclosure does not discuss or explain a keystone vector.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 3-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term “keystone vector” is still not clearly defined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claims 1 and 3-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Potekev (U.S. Patent No. 6,419,365). Potekev teaches an optical system for a projector, comprising: a light source 20/32; a projection lens 52 for externally projecting light incident from the light source; an image-forming panel 50 in the form of a DMD (col. 4, line 28) disposed between the light source and the projection lens, and for modulating the light incident at a certain incident angle from the light source, forming an image, and reflecting the formed image onto the projection lens; and a light integrator 92 disposed between the light source and the image-forming panel, wherein the light integrator transforms a cross-sectional face of the light, incident from the light source and radiated onto the image-forming panel at a certain incident angle, into a shape corresponding to the image-forming panel plane so that the cross-sectional face of the light has the same margin width around edges of the image-forming panel plane (figure 6) wherein the light integrator reduces the shape of the cross-sectional face of the light incident from the light source and radiated onto the image-forming panel at a certain incident angle in proportion to $\cos \theta$ (figure 5). 78 is an axis about which the DMDs rotate. The applicant is directed to review figures 5-8 as well as col. 2, lines 51-55, col. 3, lines 14-18, lines 44-58, col. 4, lines 27-28, lines 64-65, col. 5, lines 17-19, lines 50-64, and col. 6, lines 6-19.

Response to Arguments

Applicant's arguments filed July 18, 2005 have been fully considered but they are not persuasive.

The applicant argues that a keystone vector is defined on page 1, paragraph 2. however the applicant goes on to explain that page 1, paragraph 2 explains what keystoneing (the keystone

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phenomenon) is. Explaining what keystoneing is does not define what the applicant considers to be a keystone vector. The applicant goes on to allege that, based on the explanation of keystoneing, one of ordinary skill in the art would know what a keystone vector is. The applicant then goes on to define a keystone vector as “a distorted angle of a projected image.” Typically, vectors have both a magnitude and direction. An angle is not a vector in the conventional sense. However, the applicant may be his own lexicographer. If the applicant meant to define a keystone vector as something which is an angle and not a vector, it is unclear why such a definition is not explicitly in the specification. The applicant is relying on claim language which includes the term “keystone vector” as part of what the applicant considers to be render the claims patentable over the prior art yet the term is not clearly discussed or mentioned in the specification. The examiner has found no reference to the term keystone vector in prior art.

The applicant argues that Potekev does not teach a light integrator that reduces the shape of the cross-sectional face of the light incident from a light source and radiated onto an image-forming panel at a certain incident angle in proportion to $\cos \theta$ with respect to the original shape of the cross-sectional face of the light in the direction of a keystone vector formed on the image-forming panel, when the incident angle of the light incident onto the image-forming panel is θ .

Potekev reduces the shape of the cross sectional face of the light incident from the light source which is then radiated onto an image forming panel 50. As can be seen in figure 5 the light is incident on the image forming panel at an angle. This angle is θ .

First it is noted that keystone vector is still undefined.

Second it is noted that there will be some proportional relationship between the reduction and the angle θ . Even if Potekev were not to explicitly disclose a particular

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proportional relationship, there is some proportional relationship between the reduction and that angle. The applicant does not recite in the claim the specific ratio/proportion. (For example, if a person holds their arm at an arbitrary angle, there is a relationship between the length of their arm and the cos of the angle that arm makes with respect to level ground. While the relationship may change from angle to angle, there is a ratio that exists at any given angle.)

Third, Potekev does reduce the shape of the cross-sectional face of the light incident from a light source and radiated onto an image-forming panel at a certain incident angle in proportion to $\cos \theta$ with respect to the original shape of the cross-sectional face of the light in the direction of a keystone vector formed on the image-forming panel. If it did not, the light illuminating the panel would result as shown in figure 4.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher E. Mahoney whose telephone number is (571) 272-2122. The examiner can normally be reached on 8:30AM-5PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher E Mahoney
Primary Examiner
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